

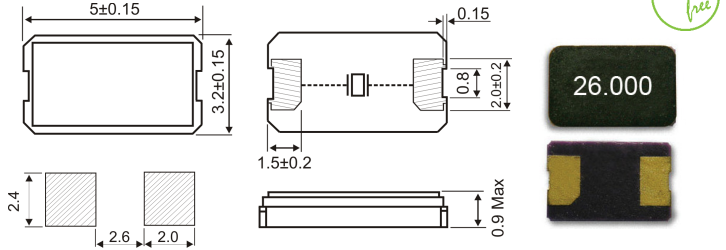
**DESCRIPTION**

The SMD0503(2P) crystal has a ultra small package and wide frequency range.

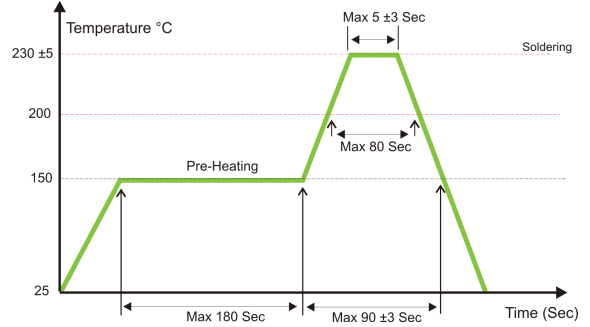
**ELECTRICAL SPECIFICATION**

Frequency Range	10.00 to 80.000 MHz	
Load Capacitance	10pF to Series	
Frequency Tolerance (at 25 °C)	±30ppM Maximum	
Frequency Stability in Temperature	±30ppM Maximum	
Operating Temperature Range	-40 °C to +85 °C	
Storage Temperature Range	-55 °C to +125 °C	
Equivalent Series Resistance (ESR)	See ESR Table	<b>ESR Table (Ohms)</b>
Drive Level	0.1mW Maximum	8.0 to 10.0MHz 100
Shunt Capacitance	7pF Maximum	10.0 to 12.0MHz 80
Aging (at 25 °C)	±5ppM per year	12.0 to 18.0MHz 60
Insulation Resistance	500 MOhm Minimum	18.0 to 40.0MHz 40

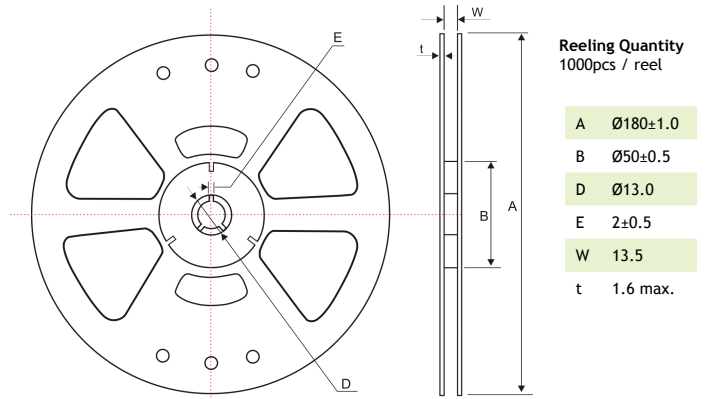
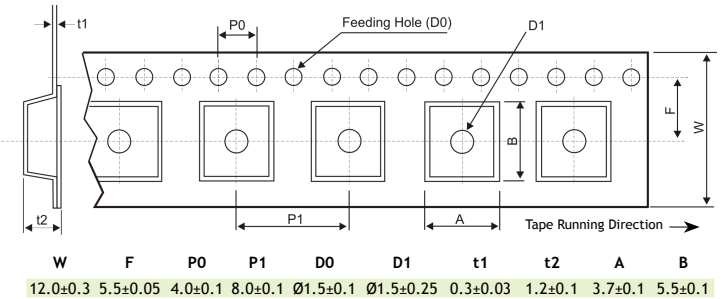
**MECHANICAL DIMENSIONS (all in mm)**



**SOLDERING**



**TAPE SPECIFICATIONS (all in mm) - Carrier Tape Dimensions**



**ENVIRONMENTAL SPECIFICATION**

Conditions		Results
<b>1. Temperature test</b>		
Temperature cycling test	Steps of cycle	1) at -55 °C, 30 minutes 2) at +25 °C, 10-15 min. 3) at +85 °C, 30 minutes 4) at +25 °C, 10-15 min.
	Number of cycles	3 times
Low Temperature test	Temperature	-20 °C ±2 °C
	Length of test	96 hours
<b>2. Aging test</b>		
	Temperature	+85 °C ±20 °C
	Length of test	96 hours
<b>3. Salt spray test</b>		
	Temperature	+35 °C ±2 °C
	Length of test	48 hours
	NaCl %	5%
<b>4. Humidity test</b>		
	Temperature	+40 °C ±2 °C
	Relative humidity	90 - 95%
	Length of test	96 hours

**MECHANICAL SPECIFICATION**

Conditions		Results
<b>1. Vibration test</b>		
	Frequency	10 - 55Hz
	Amplitude	0.762mm
	Sweep	1.0 minute
	Duration	2 hours
<b>2. Terminal Strength</b>		
Lead pulling test	Load	907.2 gram
	Direction	to the downward
	Duration of applied force	5 seconds
Lead bending test	Load	453.6 gram
	Bending angle	90° to normal position
	Rate of bending	3 seconds in each cycle
	Number of bending	3
<b>3. Lead solderability test</b>		
	Dipping in solder (+245° ±5 °C) for 5 seconds	More than 95% of surface being tested should be coated uniformly with solder
<b>4. Drop test</b>		
	Method of drop	Natural drop
	Dropping floor	Hard wood board
	Height	30 cm
	Number of drops	3 times

**PART NUMBERING SYSTEM (Example)**

**SMD0503-11.0592-F-20-30-30-A-T-2P**

